

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Marie Chan et al.  
Serial Number: 10/783,729  
Filed: February 20, 2004  
For: **COMPOSITIONS AND METHODS FOR CLEANING TEXTILE SUBSTRATES**  
Group Art Unit: 1751  
Examiner: John R. Hardee

**DECLARATION UNDER 37 C.F.R. § 1.132**

Honorable Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

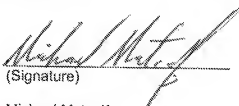
Sir:

I, Michael Metcalf, declare the following:

1. For the last twenty-one (21) years I have been employed by Milliken & Company located in Spartanburg, South Carolina.
2. My experience in the textile and chemical industry has been devoted to the research, design, and processing of additives for application to and/or on textile products. My current position with Milliken & Company is as a Senior Technical Associate with Milliken Chemical Division.
3. For the last fourteen (14) years with Milliken & Company, my work has primarily focused on the development and testing of commercial and residential cleaning products for textile substrates.
4. I am familiar with the above-referenced patent application as Applicant as well as US Pat. No. 4,481,126 (hereinafter, the '126 Patent). It is clear that the claims of the above-referenced application require the addition of silicone to the liquid

cleaning composition. It is also clear that the '126 Patent is directed for use on hard surfaces such as automobile exteriors.

5. I have undertaken some comparative experiments to determine the effects of using the liquid cleaning composition of the '126 Patent, which includes silicone, on a textile substrate (see the attached "Comparative Testing" and Exhibits A - D). Such data shows that the '126 Patent compositions deleteriously affect the ability of the composition to clean a textile substrate.
6. Thus, in my opinion, the specific teachings of the '126 Patent do not accord a liquid cleaning composition for use on textile substrates as required within Applicants' claims and that the addition of silicone in the '126 Patent deleteriously affects the cleaning efficacy of the composition. Hence, in my opinion, such a comparison shows the unobviousness of the claimed invention in light of the teachings of the '126 Patent.
7. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.



(Signature)

Name: Michael Metcalf  
Residence: 404 Carrington Drive  
Boiling Springs, South Carolina 29316  
Citizenship: United States of America

Date: September 19, 2006

### Comparative Testing

The comparative testing performed by Applicants and illustrated in Exhibits A -- D is as follows:

Applicants re-created the cleaning compositions of Examples VIII and IX of the '126 Patent. Examples VIII and IX included, among other ingredients, silicone compounds. Comparative testing was also done by preparing Examples VIII and IX without silicone being present in the composition (i.e. "Trinh Example VIII Less Silicone" and "Trinh Example IX Less Silicone").

The "Inventive Composition" represents the cleaning composition of the instant invention. For this testing, the "Inventive Composition" comprised:

<u>Ingredient</u>	<u>Amount (% by wt.)</u>
Water	96.2775
Urea Formaldehyde Polymer	1.0
Veegum® T (smectite clay)	2.0
Citric Acid (pH adjuster)	0.02
Butyl Cellosolve (solvent)	0.5
Pluronic® LF L62 (surfactant)	0.20
Fragrance	0.0025

The cleaning compositions of Examples VIII and IX (with and without silicone) and the Inventive Composition were applied to various carpet and fabric substrates (i.e. textile substrates) and visual observations were noted and photographed.

Exhibit A shows the cleaning compositions applied to tan/beige pile carpet and to blue and red fabric samples. The Inventive Composition was a uniform, stable dispersion. In contrast, the compositions of Examples VIII and IX were non-uniform, pasty, and formed many large and small clumps.

Exhibit B shows the cleaning compositions after they have been rubbed into the carpet and fabric samples (this procedure aids in removing soil from the textile substrates). Again, the Inventive Composition was a stable dispersion. In contrast, the compositions of Examples VIII and IX were clumpy. It appears as though the composition of Example VIII was unable to even penetrate the surface of the carpet and fabric samples to provide any cleaning efficacy whatsoever. Example IX penetrated the surface of the carpet and fabric samples to some degree, but it also formed many clumps as well.

Exhibit C shows the cleaning compositions after drying overnight and then vacuuming. The inventive composition was removed completely from the carpet and fabric samples. The cleaning composition of Example VIII was removed completely as well; however, it never penetrated the surface of the carpet and fabric samples to provide any cleaning efficacy whatsoever. With regard to Example IX, vacuuming removed the clumps that were present on the carpet and fabric samples; however, the remainder of the cleaning composition of Example IX remained adhered to the surface of the carpet and fabric samples after vacuuming (most visible on the fabric samples).

The carpet samples from Exhibit C were then soiled. Then, the application, rubbing, and vacuuming process described above was repeated for the carpet samples. Exhibit D shows the carpet samples after this soiling and cleaning process. The Inventive Composition was again completely removed from the carpet samples. The soil was completely removed as well. The cleaning composition of Example VIII formed clumps during the application and rubbing

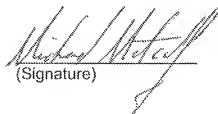
steps, and thus, did not penetrate the surface of the carpet samples to provide any cleaning efficacy. The cleaning composition of Example IX penetrated the surface of the carpet samples to some degree and formed small clumps. The small clumps were removed during vacuuming, but the cleaning composition that did penetrate the surface of the carpet samples remained adhered to the carpet.

With regard to the soil applied to the carpet samples of Examples VIII and IX, the dark areas observed on the carpet show that the soil was not completely removed from the carpet for either of Trinh's cleaning compositions. The cleaning compositions of Examples VIII and IX that are notated as not containing silicone appear to be slightly less soiled than their counterparts which contain the silicone component.

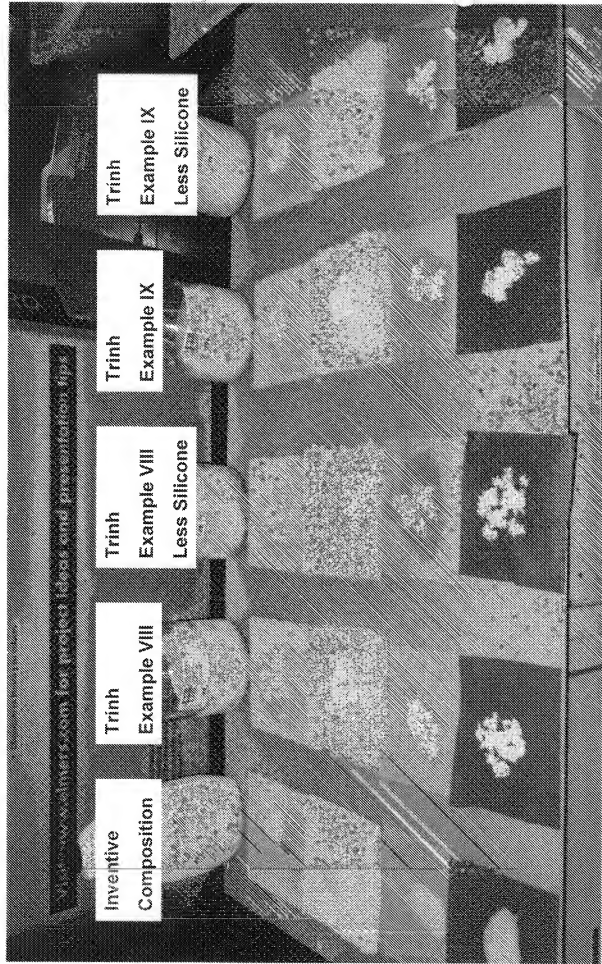
The comparative testing presented herein indicates that silicone detrimentally affects the ability of the cleaning composition of the '126 Patent to remove soil from textile substrates such as carpet. The test results further indicate that the compositions taught by the '126 Patent fail to function as a suitable cleaning composition for a textile substrate.

In furtherance of the Declaration and Exhibits A – D to which this Comparative Testing is attached, I, Michael Metcalf, do solemnly attest to the fact that I performed the above experiments.

Date: September 19, 2006

  
(Signature)

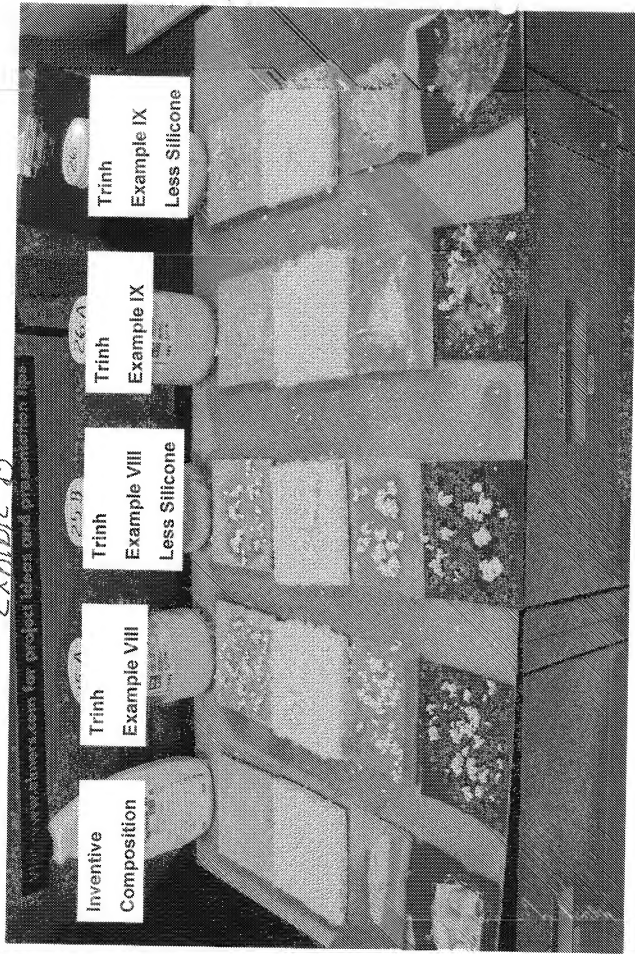
# Exhibit A



Product Applied

Exhibit A

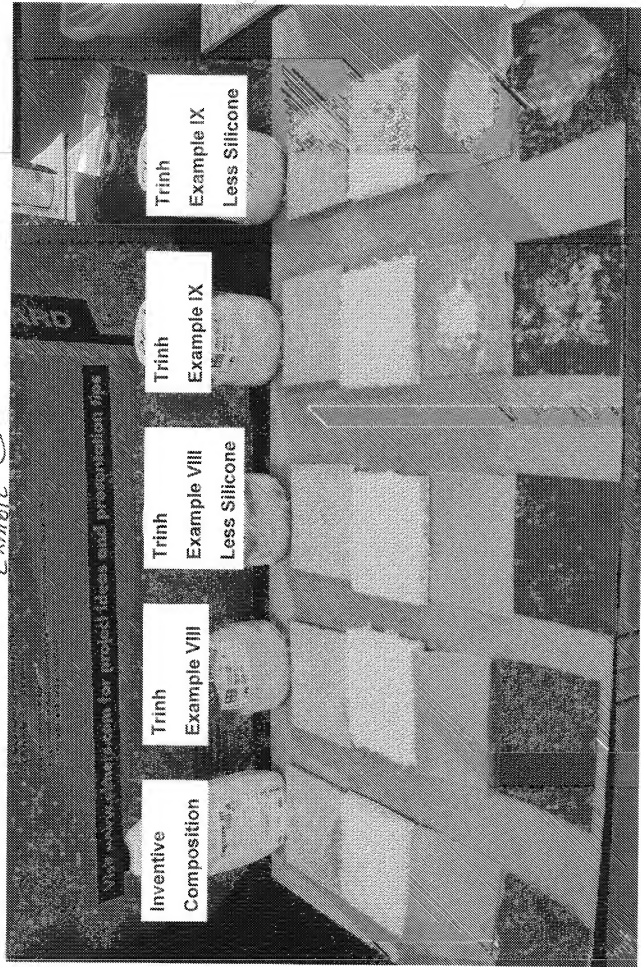
Exhibit B



Post Rub in

Exhibit B

*Exhibit C*



Post vacuuming

*Exhibit C*



Exhibit D

Visit [www.bimnet.com](http://www.bimnet.com) for project ideas and presentation tips

25 A

Inventive  
Composition

Trinh  
Example VIII

25 B

Trinh  
Example VIII  
Less Silicone

26 A

Trinh  
Example IX

26 B

Trinh  
Example IX  
Less Silicone

Soiled and then vacuumed second time

Exhibit D